

REMARKS

Applicant respectfully requests reconsideration of this application as amended.

As a preliminary matter, in the Office Action mailed March 5, 2004, the Examiner did not attach an initialed copy of the PTO-1449 form references that were mailed to the PTO on January 29, 2004. As such, applicant respectfully requests that the Examiner indicate that these references have been considered and made of record.

Claim Rejections - 35 U.S.C. § 102

The Examiner has rejected claims 18-21 and 23-28 under 35 USC 102(e) as being anticipated by Pavate et al. (U.S. Patent No. 6,432,819 B1). The Examiner has rejected claims 18-21 and claim 26 under 35 102(e) as being anticipated by Edelstein et al. (U.S. Patent No. 6,181,012 B1). The Applicant respectfully traverses. The cited references, either individually or in combination, do not teach or render obvious the Applicants claimed invention. In particular, the cited references do not teach all of the elements of the independent claims 18 and 26.

The cited references do not teach the element of independent claim 18 of “a bulk metal layer on the dielectric layer, the metal layer comprising a first metal and a second oxidized metal, wherein the second metal is present in an amount sufficient to increase the hardness of the metal layer.” In contrast, Pavate teaches a doped seed layer 210 and not a doped bulk metal layer (see col. 6 lines 8 – 20.) Similarly, Edelstein teaches a copper alloy seed layer. Edelstein also teaches a main copper conductor body with an alloying element such as C, N, O, Cl or S which have been shown to improve the reliability of the copper conductor (see Col. 7 lines 64 – 67.) The alloying elements within the main copper conductor body of Edelstein are not oxidized. Therefore, Pavate and Edelstein both fail to teach or render obvious independent claim 18 and the claims 19 and 20 that depend upon and incorporate the elements of claim 18.

The cited references do not teach the element of independent claim 26 of “a bulk metal layer comprising copper and beryllium.” In contrast, Pavate teaches a doped seed layer 210 doped with beryllium (Be)(see col. 6 lines 8 – 20.) Similarly, Edelstein teaches a copper alloy seed layer doped with beryllium (Be)(see Col. 8 lines 33 - 39.) Therefore, Pavate and Edelstein both fail to teach or render obvious independent claim 26 and claims 27 and 28 that depend upon and incorporate the elements of claim 26.

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If there are any additional charges, please charge Deposit Account No. 02-2666.

Respectfully submitted,

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